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ABSTRACT

Evaluation instruments to assess existing attitudes and interests concerning the environment are compiled. Baseline data will be gathered from teachers, administrators, parents, and community members through a set of four pretests administered prior to initiation of the Interlakes Environmental and Outdoor Education Project. All instruments serve to determine the attitudes, interests, enthusiasms, knowledges, and anticipations of the specific groups. In addition, survey instrument number 1, Administrator Staff Project Evaluation, will determine the extent to which administrators plan to use personnel, facilities, equipment, and school time for the project. Instrument 2, Parent Self-Evaluation, will indicate the scope of participation in school programs and activities, while number 3, An Adult Self-Study About Environmental Education, will include identification of the school's role in handling concerns of pollution, ecology, and conservation and show how well they feel the school is performing its role. Teacher Self-Evaluation, instrument 4, will assess the extent teachers presently use environmental education materials and expect to use them under the Project. Finally, an awareness and attitude survey of natural resources for grade five students and a concept development assistance inventory are included. This work was prepared under an ESEA Title III contract. (BL)

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ED 067231

ADMINISTRATOR'S ENVIRONMENTAL EDUCATION EVALUATION MANUAL

PART I. PRETEST

No. 1 - Administrator Staff Project Evaluation

No. 2 - Parent Self-Evaluation

No. 3 - An Adult Self-Study about Environmental Education

No. 4 - Teacher Self-Evaluation

Center Report Series 71-110

Developed by

Interlakes Environmental and Outdoor
Education Program
Chester Area Schools, Chester, South Dakota
ESEA Title III Project No. 51-0002-3

and

Educational Research and Service Center
School of Education
University of South Dakota
Vermillion, South Dakota

March, 1971

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Credit for the development of this instrument is due the following persons:

Mr. Major L. Boddicker - Interlakes Environmental Education Director

Dr. Bruce G. Milne - Consultant on Evaluation and Instrument Design

Dr. Jerry Horn - Evaluation Consultant

Dr. Richard Sagness - Evaluation Consultant

Mr. James C. Simpson - Program Planning and Evaluation Consultant

Mr. Cortland Carnes, Sister Margaret Mulcrone, Mr. Richard Mentele, Mr. Kenneth Urevig, Mr. Derrill Chapman, and Dr. James O. Hansen provided evaluation objectives for this instrument and assisted in preparation and testing of the instrument.

ADMINISTRATIVE MANUAL

Interlakes Environmental and
Outdoor Education
Chester Area Schools (LEA)
Chester, South Dakota

The accompanying evaluation instruments and evaluation schedule have been specifically designed for the Interlakes Project. The purposes of the evaluation are explained in this manual and in each of the survey instruments. Ultimately, the total evaluation should provide an adequate and accurate pre-test measure of the existing status of environmental concerns in the Interlakes Project area. The evaluation profile has been developed from lists of program objectives submitted by the administrators in the various schools involved in the project. Specifically, the evaluation calls for the points of view of teachers, administrators, parents, and community members. An evaluation of the students' cognitive and affective status has also been provided; however, the evaluation of student participation in the program will be dependent upon many variables such as grade level, local community, teacher emphasis, and extent of participation. An ongoing and post-test evaluation has been included for consideration.

The pre-test evaluation, which is the major intent of this document, is of utmost importance in any project of the magnitude of this program. An attempt has been made to gather together as much baseline data as is possible. Most of the information sought is affective in nature and attempts to gain insight into the attitudes, interests, concerns, and expectations of the several groups being examined.

Pre-test Evaluation

The major intent or purpose of the Interlakes Project has been interpreted to be that of developing a genuine concern for the environment and its related problems by participating in an outdoor educational program. In order to evaluate the outcomes of such a program, it has been essential that existing attitudes and interests concerning the environment be assessed. No matter how vague or abstract the information gained from the accompanying survey instruments, it is essential that we at least know how much is known and what attitudes are held. In designing the pre-test instruments, several specific items are sought:

Cognitive: Do the various respondents know that --

1. The Interlakes Project is being funded by federal monies?
2. The Interlakes Project is to extend beyond the limits of the classroom and calls for an out-of-doors learning experience?
3. The Interlakes Project will place emphasis on such concerns as pollution, ecology, and the conservation of both human and natural resources?
4. The Interlakes Project calls for active participation on the part of not only the students, but the school staff, parents, and members of the various communities?

5. The Interlakes Project demands a commitment on the part of the teachers to successfully implement environmental education into their regular educative program?
6. The Interlakes Project involves several communities, a number of elementary schools, and hundreds of students under the leadership of a single director and an advisory council?
7. The Interlakes Project will result in the development of curricular materials and methods of instruction which will be exemplary and demonstrative so that other schools may be encouraged to attempt similar programs?

Affective: Do the respondents feel that --

1. There is an existing need for greater concern for environmental education?
2. There is increasing concern among thought leaders of the world over environmental pollution and our inability to deal with the wastes generated by a technological, consumption-oriented society?
3. The schools are our best medium for sensitizing the next generation to the need for a concerted social, political, and scientific attack upon the problems of environmental pollution?
4. There is a definite need to place environmental education in high priority in our school program?
5. The student best learns about such concerns as pollution and conservation first, at an early age and secondly, by actual experiencing or perceiving rather than being told about them or reading about it?
6. There is a need for the teacher to make her classroom and field experiences relevant and meaningful to the concerns of the society as well as those of the child?
7. There is a definite need for the individual student, teacher, administrator, parent, or community member to be actively committed to conserving natural and human resources?
8. There is a need for each individual citizen, young and old, to become aware of our dependency upon our environment?

Further information is sought in the various survey instruments which will provide insight into such matters as:

1. Those community members who are considered to be opinion leaders.
2. Those community or area members who are considered to be specifically trained or talented in some area of environmental education.
3. Those teaching practices and attitudes which are considered less than desirable for the effective development of an out-of-doors education program.
4. Those teachers who appear to be positively oriented toward the Interlakes Project.
5. Those parents who are willing to participate actively in the Interlakes Project.
6. Those community members who are willing to participate actively in the Interlakes Project.

7. Those teachers who anticipate making environmental education a part of their entire educational program.

Since we are depending upon how the information can be identified in "clusters," it must be realized that some of the data gathered will be of little use. The "shotgun" technique of searching for data has the distinct advantage of potentially uncovering some hidden areas of concern. In other words, you often hit something which becomes very useful to the study.

All statements used in the survey instruments have been made in the common vernacular; and wherever possible, technical terms have been purposely avoided. Direct statements have been made which might represent statements that would arise in general conversation. A simple statement of purpose or intent accompanies each of the survey instruments.

Ongoing Evaluation

An ongoing evaluation should accompany this pre-test evaluation. This ongoing study should include periodic checks on the progress of specific aspects of the Interlakes Project; the activities of students, teachers, administrators, and community members; and the publicity given to the Project. Although not the primary purpose of this type of evaluation, an ongoing measurement often stimulates interest and more active participation in a project.

The ongoing evaluation is not included in this document, but it is strongly recommended that such an evaluation include the following provisions:

1. The development of an executive log which records the day-by-day or week's activities of the Interlakes Project.
2. An accurate, documented account of each visit to the Project site, the purpose of the visit, and a brief summary of the activities. Whenever possible, the documentation should include photographs of the activity sessions.
3. An accurate, documented account of each advisory council session, in-service training session, consultant visitation, and evaluation session. Wherever possible, a prepared agenda should accompany the report of the sessions.
4. Periodic announcements through a newsletter that attempts to act as a cohesive force for the entire Interlakes Project. (Because of the number of schools involved, a newsletter or some such news vehicle appears to be imperative.)
5. An accurate, documented account of the visits of the director or council members to each of the participating schools.
6. Periodic staff meetings which emphasize the reporting of successful innovative practices.
7. Accurate and well-distributed listings of publications, audio-visual aids, and non-print materials available to the participating schools.
8. Periodic checks on administrative directives, meetings, and reviews of the Project.
9. Periodic administrative evaluation checks on changes in teacher behavior in planning, preparation, review, etc. which can be attributed to involvement in the Interlakes Project.

10. Periodic, documented visits by the administrators to the classrooms involved in the Project.
11. A definite ongoing evaluation schedule should be developed and set in motion which will provide accurate, documented accounts of the activities of the program.

Impact data which can be directly attributed to the Interlakes Project can be gained from a number of sources. A "brainstorming" session by the staff of each school or the advisory council can develop a workable list of sources. Wherever possible, crosschecks should be made which would indicate that there has been an attempt to strengthen any weakness incovered in the pre-test evaluation. The reliability and validity of the evaluations used in this program will be best derived from as many crosschecks as possible.

Post-test Evaluation

Near the end of the Title III funding period, a final, comprehensive evaluation should be made following the basic design of the pre-test survey instruments. Correlation studies between pre- and post- data can be made. It is hypothesized that the post-test data will indicate that:

1. The cognitive and affective questions asked above will receive positive answers.
2. The students, teachers, administrators, and community members will demonstrate by their active involvement in environmental education that they have met the challenge of the program.
3. A positive curricular re-building has occurred in each participating school and that subjects are not taught in isolation but rather as part of a total problem-solving approach.
4. There will be a definite, positive, and expressed favorable effect on the Interlakes Project environment program site which the people will point to with pride.
5. There will be a noticeable increased interaction among the students, teachers, administrators, and community members which can be somewhat attributed to the Interlakes Project.

In-Service Training Sessions

As an integral part of the maximum achievement of the benefits of the Interlakes Project, it is essential that the advisory council and school administrators provide for in-service training of their staff members. It is strongly recommended that a concerted effort be made to examine the results of the pre-test survey with the intent of removing such forces which appear to be blocking the successful completion of the Project. A careful study of lists of environmental concepts developed by other programs should be made by the teachers at their in-service training sessions. (A list of concepts related to environmental management for possible inclusion in school curricula is available from the Center for Cognitive Learning, The University of Wisconsin, Madison.)

Objectives for the program should be clearly defined; first, at the Project Director's level; secondly, at each school; and finally and most importantly, at each classroom level. Once these objectives have

been clearly stated, it will be possible to make further evaluations at each level. The results of such evaluations, as well as an evaluation of each of the in-service training sessions themselves, will provide additional recorded data.

Reporting

A final summary of the Interlakes Project should include the pre-test, ongoing, and post-test evaluation data and any other support data. This summary must be made in the annual and final reports to the ESEA Title III Directors in Pierre.

Survey Instrument #1

--Name: ADMINISTRATOR STAFF PROJECT EVALUATION (Pre-test)

--Purpose: This survey instrument is intended to serve as a means of consolidating the attitudes, interests, concerns, and expectations of the several administrators involved with the Interlakes Project. A further purpose is to cause these administrators to reflect on their respective school programs and to determine the extent to which they plan to use personnel, facilities, equipment, and school time for the Project.

--Results: From the findings of this survey, the advisory council should be able to develop a clear picture of the total project which involves several school communities. It may be necessary to re-direct particular portions of the Project to answer the greater concerns.

--Directions: Every administrator whose school is involved in the Interlakes Project should complete this survey and also have subordinate administrators, supervisors, and directors complete the survey in order to gain a clear perspective of the aspirations, etc. of the leadership involved.

--The survey will be tabulated and analyzed by the University of South Dakota, and the results given to the advisory council for their consideration and action.

Survey Instrument #1

ADMINISTRATOR STAFF PROJECT EVALUATION (Pre-test)

By the very nature of this survey, it should be assured that the information gained will not be used to identify you as the respondent. All information gained will be held in the confidence of the evaluator, and only the composite results will be made known to the advisory council for the Interlakes Project.

Please complete the following survey form and mail it to Dr. Bruce G. Milne, Educational Research and Service Center, School of Education, University of South Dakota, Vermillion, South Dakota, 57069.

A. Staff and Program Analysis

Read each item carefully and underline quickly the phrase that best expresses your feelings about the statement.

1. The teachers in our system are generally well trained and competent to teach an environmental education curriculum.

Strongly Agree Agree Undecided Disagree Strongly Disagree

2. Most of the teachers in our system have adequate time for planning and preparing outdoor learning activities.

Strongly Agree Agree Undecided Disagree Strongly Disagree

3. Generally our science curriculum program is as good as any other school I am familiar with.

Strongly Agree Agree Undecided Disagree Strongly Disagree

4. Our teachers have shown little enthusiasm for outdoor learning activities in their teaching programs.

Strongly Agree Agree Undecided Disagree Strongly Disagree

5. Out school program can use new and innovative programs to upgrade its quality of education.

Strongly Agree Agree Undecided Disagree Strongly Disagree

6. Generally our teachers are cooperative and open for change and will support an environmental education program.

Strongly Agree Agree Undecided Disagree Strongly Disagree

7. The major objective of our educational program has been to prepare children for a responsible and contributing life as adults.

Strongly Agree Agree Undecided Disagree Strongly Disagree

8. In general, our teachers are pretty well informed about newer trends in education.

Strongly Agree Agree Undecided Disagree Strongly Disagree

9. Our program is highly structural and adopting and implementing an environmental education program will be difficult.

Strongly Agree Agree Undecided Disagree Strongly Disagree

10. Most of the teachers make an effort to involve students in the planning of their program.

Strongly Agree Agree Undecided Disagree Strongly Disagree

11. The teachers in our school are active in community affairs and concerned about the community's actions to improve the environment.

Strongly Agree Agree Undecided Disagree Strongly Disagree

12. Most of our teachers are concerned about the pupils' personal and social problems as well as their school affairs.

Strongly Agree Agree Undecided Disagree Strongly Disagree

13. In general, our teachers use a wide variety of sources of information in teaching science and environmentally related subjects.

Strongly Agree Agree Undecided Disagree Strongly Disagree

14. Many "outside resource people" are used in our school program. (speakers, experts, demonstrations, etc.)

Strongly Agree Agree Undecided Disagree Strongly Disagree

15. Evaluation in our school of a student's ability in science is generally based on a student's oral and written performance on tests.

Strongly Agree Agree Undecided Disagree Strongly Disagree

16. Most of our teachers provide for learning experiences outside of the classroom. (field trips, exhibits, etc.)

Strongly Agree Agree Undecided Disagree Strongly Disagree

17. Teachers generally use audio-visual aids equipment in teaching environmentally related subjects.

Strongly Agree Agree Undecided Disagree Strongly Disagree

18. We make adequate use of the resources of our community in our educational program.

Strongly Agree Agree Undecided Disagree Strongly Disagree

19. Our school often is involved in a common program or project which involves all of our youngsters.

Strongly Agree Agree Undecided Disagree Strongly Disagree

20. There is good communication about the school program among our teachers.

Strongly Agree Agree Undecided Disagree Strongly Disagree

21. The parents of our school children are fairly well informed about the objectives and purpose of the Interlakes program and its role in our school.

Strongly Agree Agree Undecided Disagree Strongly Disagree

22. Parents of our school children are difficult to get involved in school affairs and will show no increased interest as a result of the Interlakes program.

Strongly Agree Agree Undecided Disagree Strongly Disagree

23. The school should avoid trying to involve the community in its programs and activities.

Strongly Agree Agree Undecided Disagree Strongly Disagree

24. We have adequate personnel to handle the traditional school program; however, additional programs would tax teacher work loads.

Strongly Agree Agree Undecided Disagree Strongly Disagree

25. It is difficult to get parents and teachers to work together in planning our school program.

Strongly Agree Agree Undecided Disagree Strongly Disagree

B. <u>Facilities and Equipment</u>

1. Our building and surrounding area is generally adequate to handle an outdoor education program.

Strongly Agree Agree Undecided Disagree Strongly Disagree

2. There is a great need for more science teaching equipment in our school program.

Strongly Agree Agree Undecided Disagree Strongly Disagree

3. We lack sufficient audio-visual equipment to implement a good environmental education program.

Strongly Agree Agree Undecided Disagree Strongly Disagree

4. Each of our classrooms is adequately equipped to allow for individualized instruction.

Strongly Agree Agree Undecided Disagree Strongly Disagree

5. We have adequate library facilities and resource materials to support an environment education program.

Strongly Agree Agree Undecided Disagree Strongly Disagree

C. Environmental Education

1. Many facets of education today are not essential and really add little to the development of our children.

Strongly Agree Agree Undecided Disagree Strongly Disagree

2. Environmental education is being overemphasized today.

Strongly Agree Agree Undecided Disagree Strongly Disagree

3. There is a nationwide need for environmental education, but it is not too much of a problem in our area.

Strongly Agree Agree Undecided Disagree Strongly Disagree

4. There has been a positive attempt to study environmental concerns in our school system.

Strongly Agree Agree Undecided Disagree Strongly Disagree

5. Most of our teachers are sufficiently trained to handle an environmental education program in their classroom activities.

Strongly Agree Agree Undecided Disagree Strongly Disagree

6. Environmental education should be mostly incorporated in the science classes.

Strongly Agree Agree Undecided Disagree Strongly Disagree

7. The schools should attempt to involve themselves with more out-of-doors education programs.

Strongly Agree Agree Undecided Disagree Strongly Disagree

8. In general, our teachers are doing a pretty good job in teaching about environmental concerns such as pollution, ecology, and conservation.

Strongly Agree Agree Undecided Disagree Strongly Disagree

9. Most of the teachers are highly interested in the Interlakes Project and environmental education.

Strongly Agree Agree Undecided Disagree Strongly Disagree

10. It will be necessary to do quite a bit of in-service training of our teachers before we are ready for environmental education throughout our school.

Strongly Agree Agree Undecided Disagree Strongly Disagree

D. Personal Attitudes

Answer as indicated.

1. How would you classify your own concern for environmental education? (check one)

_____ extremely interested
_____ quite interested
_____ mildly interested
_____ not particularly concerned

2. How much emphasis should be placed on environmental education in school? (check one)

_____ a definite, positive emphasis
_____ a general emphasis
_____ emphasis left to the teacher
_____ depends upon student interests

3. How much of an impact do you think an environmental educational program will have in your school? (check one)

_____ should produce positive results
_____ probably will not change anything
_____ little if any impact on the real problem

4. As an administrator, how do you think environmental education fits into the school program? (check one)

_____ as a major part of the total curriculum
_____ as part of the science program
_____ as an extra activity by itself

5. Of all of the things being emphasized in education today, do you think environmental education should be given the emphasis it is in your school? (check one)

_____ it would be my first choice
_____ it would be among my top choices
_____ I don't feel strongly favorable for it
_____ there are far more pressing concerns

6. How do you classify your knowledge of the general problem of pollution, ecology, and environmental concerns? (check one)

_____ very well informed
_____ well informed
_____ somewhat informed
_____ not too well informed

7. With the environmental education project's intent to have out-of-doors activities, how do you find your own participation in such? (check one)

_____ active, out-of-doors participant
_____ active, largely administrative, but not out-of-doors participant
_____ somewhat involved in the out-of-doors activities
_____ only slightly involved with the out-of-doors part

8. Do you see parents getting actively involved in the environmental educational program? (check one)

_____ definitely
_____ some probably will
_____ no more than any other program
_____ probably not

9. Do you see any community interests, businesses, or individuals feeling threatened and resisting the environmental education project? (check one)

_____ definitely
_____ probably some
_____ I doubt it

10. Do you consider yourself sufficiently trained and talented to provide leadership and instruction for your teachers in environmental education? (check one)

_____ adequately trained
_____ will need more training
_____ will need lots of outside help

11. Do you have concerns for the regular school program if environmental education gets emphasized? (check one)

_____ probably will make total program stronger
_____ probably won't bother regular program
_____ probably will weaken regular program

12. Looking ahead for the next two years, how do you feel a concentrated emphasis on environment will affect the students in your school? (check one)

_____ have a tremendous impact
_____ will have a good effect
_____ probably won't change them much
_____ probably will get bored

13. How do you view the amounts of money being spent on the Interlakes Project by Title III ESEA? (check one)

_____ money well spent
_____ money could be used better somewhere else
_____ a waste of money so far
_____ no opinion

14. As you view the Project to date, how would you classify the leadership? (check one)

_____ satisfactory
_____ weak and lacking
_____ unsatisfactory
_____ no opinion

15. Do you think the Project should be continued for another year or so? (check one)

_____ definitely
_____ possibly
_____ let's drop it

E. A survey of opinions held by "influential community leaders" will be made as part of the Interlakes Project. Would you please list the names of persons who you believe are highly influential in affecting public opinion in your community? These persons may or may not hold "official" leadership positions.

(List at least five)

NAME	ADDRESS

Survey Instrument #2

--Name: PARENT SELF-EVALUATION (Pre-test)

--Purpose: With the results of this survey, it should be possible to determine the existing attitudes and enthusiasms of the parents of students in the various communities involved in the Interlakes Project toward environmental concerns, education, and the project itself. Such a survey should also indicate the extent of participation in general school programs and activities which will serve as guidelines for analyzing parent involvement in the Project.

--Directions: A copy of this survey instrument should be sent home with selected students. One of the parents should complete the questionnaire and return it to the school in a sealed envelope. The sealed envelopes should be transmitted to the University of South Dakota where the results will be tabulated and analyzed. Since some of the information asked for is somewhat confidential, it would be well if the advisory council would guarantee the necessary confidence to the parents. Only the composite results will be known to the advisory council and other school staff members.

--All tabulation of this instrument will be done by the Educational Research and Service Center, School of Education, University of South Dakota, Vermillion.

Survey Instrument #2

PARENT SELF-EVALUATION

We are asking your help in an evaluation of a special program being carried on by the local schools and the schools in this area. The program is concerned with environmental education, and your child will be expected to participate actively in it. Would you please fill out the following questionnaire, seal it in the envelope, and return it to the school with your child. The sealed envelope will be forwarded to the University of South Dakota for tabulation. Your frankness in answering the questions is earnestly desired.

Mark the blank which best describes your answer to the statement.

1. In regard to the Interlakes Environmental and Outdoor Education Project going on in our schools, I feel that

_____ A. I am fairly well informed about the Project.
_____ B. I know about the Project.
_____ C. I know very little, if anything, about the Project.
_____ D. I am completely unaware of the Project.

2. The Interlakes Project is being funded mostly by funds made available through:

_____ A. local tax funds
_____ B. state funds
_____ C. federal funds
_____ D. local and state tax money
_____ E. donations

3. The Interlakes Project in environmental education will provide a learning situation out-of-doors

_____ A. at a designated site
_____ B. throughout the county
_____ C. near the Vermillion river
_____ D. in each school yard

4. The Interlakes Project is being directed by

_____ A. the local school board
_____ B. a local director and advisory council
_____ C. an area director and an advisory council
_____ D. the local school administration

5. The Interlakes Project is

_____ A. the first such environmental education program in our area
_____ B. the only environmental education program in the state
_____ C. the first approved out-of-doors education program in this part of the state
_____ D. none of the above
_____ E. all of the above

6. Which statement best describes your contact with the school where your child attends?

_____ A. I am generally pretty well informed about what the school is doing in its instructional program.
_____ B. I have a general idea of what the school is doing in its instructional program.
_____ C. I have only limited information on what the instructional program involves.
_____ D. I really don't know much about the instructional program at all.

7. In terms of keeping the parents informed about the school's instructional program, I feel the school

_____ A. does a very fine job of informing
_____ B. does a fairly good job of informing us
_____ C. could do a much better job of keeping the parents informed
_____ D. does not do a very good job of informing the parents

8. In general, I think the teachers in our school

_____ A. are doing an outstanding job of teaching our children
_____ B. are doing a better than average job of teaching our children
_____ C. are doing a fair job of teaching our children
_____ D. are doing a poor job of teaching

9. How would you consider yourself in regard to school activities?

_____ A. very active in school activities
_____ B. moderately active in school activities
_____ C. limited activity in school affairs
_____ D. never active in school affairs

10. How many times have you visited school so far this school year?

_____ A. never
_____ B. one or two times
_____ C. less than five times
_____ D. between five and ten times
_____ E. more than ten times

Please indicate your attitude about each of the following statements by checking the column at the right which most represents your feeling.

Statement	Strongly Agree	Agree	Tend to Agree	Tend to Disagree	Disagree	Strongly Disagree
1. Most of the children seem to enjoy school.						
2. I worry about the future facing today's children.						
3. There should be more emphasis placed on environmental concerns.						

Statement	Strongly Agree	Agree	Tend to Agree	Tend to Disagree	Disagree	Strongly Disagree
4. The teachers do a good job of teaching about conservation.						
5. There should be more opportunities for the students to study out-of-doors.						
6. Every community should demand that the schools have an environmental education program.						
7. The schools should stick to the 3 R's and forget about taking on anymore programs.						
8. I don't think we need to be too concerned about pollution in our community.						
9. There is too much emphasis being placed on conservation, environment, and pollution.						
10. If we are going to solve the environmental problems, we are going to have to build proper attitudes in the young people.						
11. In general, young people have a good understanding of the problems of our environment.						
12. The best way to learn about nature and the beauty of nature is to get out-of-doors and study it.						
13. There seems to be more smoke dust and smells in the air than there use to be.						
14. The children today are better informed about what is going on in the world than when I was young.						
15. Students are given too much freedom in our school.						
16. Most of the teachers my child has in school really never get to know him (or her) as an individual.						
17. The teachers should spend more time with the individual students than they do.						
18. The teachers do a good job of making school work exciting and meaningful.						
19. Parents should be given more of an opportunity to get acquainted with the school's program.						
20. Most of the parents are fairly well satisfied with our school program.						

Statement	Strongly Agree	Agree	Tend to Agree	Tend to Disagree	Disagree	Strongly Disagree
21. In general, the teachers are very well trained for their teaching positions.						
22. There are too many "frills" in our school program.						
23. Most of the parents are concerned about environmental problems and would welcome a program which will teach their children about these problems.						
24. Most parents would volunteer their help in making an out-of-doors program in conservation a success.						
25. If asked to participate, I would try to help out the school program where I could.						

26. Do you belong to any organizations which are taking an active role in environmental education programs? (For example: The Garden Club of America, Isaak Walton League, National Audubon Society, National Wildlife Federation, etc.)

Yes No

If Yes, list the organizations.

_____

_____

_____

_____

_____

After you have completed the questionnaire, seal it in the envelope provided and return it to the school with your child. The sealed envelopes will be forwarded to the Educational Research and Service Center of the School of Education at the University of South Dakota, Vermillion. They will tabulate the questionnaires and inform us of the results. We hope that we can use the information in improving the education program for your child and the children of all other parents in our community.

Thank you for your cooperation.

The Faculty and Administration

Survey Instrument #3

--Name: AN ADULT SELF-STUDY ABOUT ENVIRONMENTAL EDUCATION

--Purpose: The major purpose of this study is to determine the existing attitudes, interests, enthusiasms, concerns, and anticipations of selected adults regarding environmental education. Other purposes would include the identification of the school's role in handling the concerns of pollution, ecology, and conservation as well as an indication as to how well the selected adults feel the school is performing its role.

--Directions: This survey instrument should be distributed to selected adults in the various communities involved in the Interlakes Project. The selection should be concerned with reaching those persons who are "influential leaders" in the community or in such a position as to lend support to the activities of the Project.

--The tabulation and analysis of the survey will be made by the University of South Dakota.

Survey Instrument #3

ADULT SELF-STUDY ON ENVIRONMENTAL EDUCATION

Please indicate your attitudes, interests, or concerns for environmental education in our school system and community by marking the response which best describes your feelings about the following statements.

A. Underline your answer.

1. Every community should demand that the schools have an environmental education program.

   Strongly Agree Agree Undecided Disagree Strongly Disagree

2. The schools are doing a good job of educating our young people about the environment already.

   Strongly Agree Agree Undecided Disagree Strongly Disagree

3. The schools should stick to the 3 R's and forget about taking on any more programs.

   Strongly Agree Agree Undecided Disagree Strongly Disagree

4. Concerns about pollution, environment, conservation, and ecology are greater in the cities and more populated areas than they are in our community.

   Strongly Agree Agree Undecided Disagree Strongly Disagree

5. We have many organizations in our community which are already doing quite a bit about pollution.

   Strongly Agree Agree Undecided Disagree Strongly Disagree

6. When you try to stop pollution in our community, you are going to step on somebody's toes and run into opposition.

   Strongly Agree Agree Undecided Disagree Strongly Disagree

7. Most of the people in our community are fairly responsible and will take an active role in fighting pollution problems.

   Strongly Agree Agree Undecided Disagree Strongly Disagree

8. No community improvement program should be carried on that is injurious to a business.

   Strongly Agree Agree Undecided Disagree Strongly Disagree

9. It's the industries and businesses who are causing the major pollution problems; there isn't much an individual can do.

   Strongly Agree Agree Undecided Disagree Strongly Disagree

10. The schools should get the kids out of the classrooms and into the out-of-doors so they can study nature.

Strongly Agree Agree Undecided Disagree Strongly Disagree

11. Members of the school as well as the community are going to have to get behind conservation programs if they are to be successful.

Strongly Agree Agree Undecided Disagree Strongly Disagree

12. You have to teach the very young children about conservation and the environment in order to build proper attitudes.

Strongly Agree Agree Undecided Disagree Strongly Disagree

13. Most of the young people in our community are respectful of the property of other people.

Strongly Agree Agree Undecided Disagree Strongly Disagree

14. The sewage system of our community is adequate and not adding to the pollution problem.

Strongly Agree Agree Undecided Disagree Strongly Disagree

15. There are some real eyesores in our community that a good civic action program could clean-up with a little effort.

Strongly Agree Agree Undecided Disagree Strongly Disagree

16. Members of this community are pretty good about keeping their property neat and clean.

Strongly Agree Agree Undecided Disagree Strongly Disagree

17. The younger people in our community are causing most of the litter.

Strongly Agree Agree Undecided Disagree Strongly Disagree

18. This used to be a better community to live in.

Strongly Agree Agree Undecided Disagree Strongly Disagree

19. We have enough time and people to "clean-up" our community; all we need is leadership.

Strongly Agree Agree Undecided Disagree Strongly Disagree

20. If someone would get a good environmental program going, I'd get behind it and give it my support.

Strongly Agree Agree Undecided Disagree Strongly Disagree

B. Check your answer.

1. Are you aware of the emphasis being placed on environmental education in the schools?

_____ fairly well informed
_____ somewhat informed
_____ not aware at all

2. Did you know that federal funds have been given to the local schools for environmental education?

_____ Yes
_____ No

3. Have you been aware of the increased amount of emphasis being placed upon the environment across the nation?

_____ very much aware
_____ somewhat aware
_____ hadn't paid any attention

4. Have you been aware of "smog" in our cities and countryside in recent months or years?

_____ quite often
_____ some times
_____ not aware of it

5. How would you classify your personal concern for the environment, ecology, pollution, and conservation?

_____ very concerned
_____ somewhat concerned
_____ limited concern
_____ not too concerned

6. How do you view all the publicity the pollution problem is getting?

_____ too much and exaggerated
_____ about right
_____ we need more of it; the problem needs publicity

7. Do you think there should be legislation to control air, water, and land pollution?

_____ definitely
_____ limited
_____ No

8. Are you aware of any polluted waters in your community or area?

_____ definitely
_____ I think there are some
_____ No

9. Should there be any regulations placed on the use of sprays and powders such as insecticides and pesticides in treating farm crops and animals?

_____ definitely
_____ should be left up to the farmer
_____ not a real problem

10. If a vote were taken for the demonstration of increased concern over environmental pollution, wastes generated by technology, and lack of conservation, would you support such a demonstration?

_____ Yes
_____ No

C. If you know of any persons who have received special training or would be qualified to assist in helping the schools teach the young people about their environment, its soils, water, air, and the need for its concern, please list their names so that they may be asked to help.

NAME	ADDRESS

Survey Instrument #4

--Name: TEACHER SELF-EVALUATION (Pre-test)

--Purpose: This survey instrument is to be given to those teachers selected in the survey to determine their attitudes, interests, enthusiasms, knowledges, and anticipations of the Interlakes Project. A further purpose is to determine the extent to which they presently make use of environmental education programs and materials in the educative program in their school and the extent they expect to involve such programs and materials under the Project.

--Results: The results of this survey will be used to measure attitude change, program modification, and cognitive growth by comparing these results with ongoing and post-test evaluation data.

--Directions: All teachers involved with the Interlakes Project should complete this evaluation. Each teacher is asked to do the necessary "soul searching" which would give evidence of his existing attitudes, interests, etc. and which would indicate the status at the beginning of the Project.

--The completed evaluation will be tabulated at the University of South Dakota and the results analyzed for the advisory council so that necessary in-service programs may be arranged.

Survey Instrument #4

TEACHER SELF-EVALUATION

Directions: Check your response to each of the following items in the proper space at the right. This information is for a school-wide survey and not an evaluation of you or your work; however, we must know your personal opinions. There are no right or wrong answers.

A. Class Presentations and Activities

To what extent do you	Often	Occasionally	Seldom	Never
1. Present specific lesson units which deal with the environment?				
2. Present specific lesson units on the pollution problem?				
3. Provide for visual aids which deal with the problems of conservation?				
4. Use student ideas regarding environmental concerns in developing your teaching units?				
5. Provide resource materials on environmental concerns?				
6. Provide out-of-doors educational experiences for your students?				
7. Provide for using the resources of the community in your teaching?				
8. Provide for laboratory type experiences which allow children to watch things grow?				
9. Encourage children to bring living things to school to share with others?				
10. Permit students to discuss possible solutions to social and economic problems?				
11. Provide experiences which encourage children to observe the beauty of nature?				
12. Provide for learning experiences which emphasize the diversity of things in nature?				
13. Provide for assignments which require the students to collect examples of nature's handiwork (such as seeds, leaves, flowers)?				
14. Provide for learning experiences which emphasize the interrelationship between natural things (such as soil and water, soil and animals, etc.)?				
15. Plan demonstration units which show man's dependency on the soil, water, and air?				
16. Help students understand that you can't disturb something in nature without disturbing other things?				

	Often	Occasionally	Seldom	Never
17. Present lessons which show how things adjust to environmental conditions?				
18. Discuss with children in your class how things in nature and the world are constantly changing?				
19. Help children recognize specific community problems which demonstrate waste?				
20. Provide learning experiences which teach children that habitual waste of our resources will cause serious problems?				
21. Provide learning experiences which allow the child to identify his responsibility in regard to such problems as littering and pollution?				
22. Provide specific lessons which emphasize the importance of the good health in conserving our human resources?				
23. Demonstrate how lack of responsibility on the part of the individual can affect the lives of others?				
24. Discuss such topics as insecticides and industrial wastes which endanger our environment?				
25. Discuss possible solutions to environmental problems where the student himself can be an active participant?				

B. Varied Teaching-Learning Experiences

How often do you

	Often	Occasionally	Seldom	Never
1. Obtain information from sources which advertize different kinds of graphic materials?				
2. Prepare bulletin boards around a specific learning concept?				
3. Set up controlled experiments in the classroom?				
4. Organize several subject areas around one learning concept (such as math, science, and social studies)?				
5. Prepare charts or graphs for children to keep daily records of change (such as weather, growth, etc.)?				
6. Identify effects and have children try to find the causes?				
7. Prepare experiments which involve the students as the experimentors?				
8. Make assignments which involve the writing of letters for information about a concern (such as pollution)?				
9. Avoid waste in the use of materials and emphasize its importance to the students?				
10. Provide for experiments which call for exact measurement?				

	Often	Occasionally	Seldom	Never
11. Provide for experiences in the learning situation which emphasize the use of the five senses?				
12. Prepare lessons which require the students to make objective tests rather than opinionated evidence?				
13. Require the students to make observation notes on what they observe during a specific period of time or event?				
14. Manipulate equipment and materials so that the individual student is responsible for its care and distribution?				
15. Emphasize the importance of clean-up responsibilities on the part of the participants?				
16. Provide for field trips?				

C. Attitudes

Please indicate your attitude about each of the following statements by checking the column at the right which most represents your feelings.

Statement	Strongly Agree	Agree	Tend to Agree	Tend to Disagree	Disagree	Strongly Disagree
1. Most of the children in my room seem to enjoy school.						
2. We are doing a good job of teaching in our school.						
3. We have adequate time for planning and preparation.						
4. There are plenty of teaching aids available to us if we want them.						
5. Working with individuals and small groups accomplishes more in learning than does large group instruction.						
6. There are not enough teachers in our system who are trained in environmental education to make the Interlakes Project really effective.						
7. It will take much more extra planning to allow the students to have out-of-doors experiences.						
8. We are going to have our hands full of student control problems when we take field trips.						
9. It will be very difficult to evaluate the lessons learned in an out-of-doors experience.						

Statement	Strongly Agree	Agree	Tend to Agree	Tend to Disagree	Disagree	Strongly Disagree
23. There are likely to be some people in the community who will get upset about our talking about local practices which cause pollution, etc.						
24. Grade school children are too young to really understand what the environmental concerns are all about.						
25. Regardless of their personal views, most of the teachers will get behind the Project and make it work as best we can.						

D. Training and Experience

Check the answer which best describes your response.

1. I would view my interest in the Interlakes Project as

_____ A. extremely interested
_____ B. somewhat interested
_____ C. mildly interested
_____ D. very little interest, if any

2. Regarding my academic training for environmental education

_____ A. I am very well trained
_____ B. I have some training
_____ C. I have very little training
_____ D. I have no training for it at all

3. How many workshops or special training sessions have you attended which dealt largely with environmental education?

_____ A. three or more
_____ B. one or two
_____ C. none

4. How much actual teaching have you done in the area of environmental education?

_____ A. I have taught this extensively.
_____ B. I have had some experience.
_____ C. I have had very little experience.
_____ D. I have not taught this as such.

5. Do you consider out-of-door education as being effective?

_____ A. very effective
_____ B. somewhat effective
_____ C. limited effectiveness
_____ D. no real value

6. How do you view your college preparation for your present teaching assignment?

_____ A. adequately prepared
_____ B. some preparation neglected
_____ C. unrelated to real teaching
_____ D. of very little value

7. How do you view your ability to develop adequate educational objectives and evaluate their success?

_____ A. highly skilled
_____ B. moderately skilled
_____ C. some skill, but need help
_____ D. little or no skill, need lots of help

8. How do you anticipate you will implement an environmental education program in your teaching?

_____ A. I will probably attach it to a specific subject such as science.
_____ B. I will probably try to develop it in a couple of subject areas.
_____ C. I will probably try to develop it in as many subjects as I can.
_____ D. I will probably teach it as a specific subject by itself.

9. How do you view the need for community involvement in the environmental education project?

_____ A. They should be informed and invited to observe the project whenever possible.
_____ B. The citizens should be directly involved as active participants.
_____ C. The school program should fit in with the community action program.
_____ D. There shouldn't be any separation between what is the school program and the community program.
_____ E. None of the above

10. How do you view the effectiveness of the Project as it has been outlined to you?

_____ A. probably very successful
_____ B. potentially successful
_____ C. limited effectiveness
_____ D. probably not successful for various reasons

AWARENESS AND ATTITUDE SURVEY
GRADE 5

Name_____

School_____

Wildlife and Fishes

1. a. Animals as well as plants need the land.
   b. Goldenrod galls are homes for worms.

2. a. Wildlife and fishes are not affected by man.
   b. Weeds are necessary for wildlife.

3. a. Too many rabbits are good for rabbit hunters, but bad for shelterbelts.
   b. Polluted water is only bad because it kills the fish.

4. a. Ants need a special place to live.
   b. Animals such as rabbits, squirrels, and birds also need special places in which to live.

5. a. Birds and animals always get along well with each other.
   b. Robins never fight over places to eat and nest.

6. a. Animal homes always are just alike.
   b. Animals all act the same way.

7. a. Some animals die because they are taken from their homes and placed in different type homes.
   b. Tropical fish could live in our lakes in the winter.

8. a. Most animals and birds suffer if their homes are disturbed.
   b. Deer could live in a plowed field all year.

9. a. Man cannot change the number of wildlife by changing, destroying or managing the places in which they live.
   b. The planting of trees in this area has encouraged deer to live here.

10. a. Man has brought a bird into this area which is harmful to other birds and man.
    b. The starling is an example of such a bird.

11. a. Planting more corn, using our creeks for sewers and dumps, drainage of sloughs and grazing cattle on all of the pasture land would not change the type and number of wildlife.

    b. Large flocks of prairie chickens once lived in this area.

12. a. Man can do things for wildlife that will keep them near him.
    b. Letting lots of weeds grow would help keep more pheasants around.

13. a. Foxes do more harm than good. We would be better off without foxes, hawks, and owls.
    b. Foxes are used by nature to cut down a surplus of certain types of birds and animals.

14. a. There is no limit to the number of fish that could live in Lake Madison.
    b. There is a limit to the number of ducks that could be raised in Lake County.

15. a. Many people enjoy fishing and hunting and it makes them happy.
    b. Hunting destroys game. Fishing destroys fish. It should be stopped.

16. a. Hunting and fishing laws are not needed because all hunters and fishermen are honest and would only take what they needed.
    b. There should be no limit to the number of ducks a hunter should be allowed to shoot.

Geology: Rocks, Air, Water and Other Minerals

1. a. Geology is earth history. The earth has a history just as you, your school, your town, your country have histories.
   b. The earth has not changed since it was formed.

2. a. Rocks tell the story of the earth.
   b. Scientists can tell the age of rocks.

3. a. Snow is very valuable to us.
   b. On a cold day, snow acts like a blanket for the ground.

4. a. Knowing about geology has made it possible to find large quantities of minerals and rocks necessary for us to live.
   b. We could live without minerals.

5. a. Earth history can be studied anywhere.
   b. Many marshes have disappeared over the years.

6. a. The history of the earth is not a very good way to study conservation.
   b. Conservation is not necessary anyway because we will always have plenty of minerals.

7. a. The earth is always changing.
   b. The land you live on might have been a vast sea at one time.

8. a. Most changes in the earth occur very rapidly.
   b. Earthquakes change the earth.

9. a. Heat and cold, wind, moving water, moving ice, and men all help to change the earth .
   b. Moving masses of ice are called glaciers.

10. a. The earth is made of rocks. Rocks are made of minerals.
    b. All rocks contain minerals.

11. a. Weathering changes rocks and releases minerals.
    b. Minerals are necessary for the soil.

12. a. Minerals are basic plant food. But we could live without minerals.
    b. We could make our own minerals if we should run out of them.

13. a. Minerals are of two kinds: metallic and non-metallic.
    b. Gold is an example of non-metallic mineral.

14. a. Minerals can always be very rapidly replaced.
    b. Silver is an example of a mineral that can be replaced easily.

15. a. Mineral resources have made Americans wealthy.
    b. We will soon be very poor because we have wasted our minerals.

Soil Conservation and Land Use

1. a. Soil is full of life.
   b. Burning a grassland kills the life in the soil.

2. a. Soil is born of many parents-minerals and sunshine, water and air, heat and cold.
   b. Soil is never killed or made so nothing will grow on it.

3. a. Soil lives, grows, and sustains other life. It cannot die.
   b. Soil can never be killed or made so nothing will grow on it.

4. a. Soil is made up of tiny particles of rock, refined and mellowed by the ages.
   b. It never takes more than three or four years to make soil.

5. a. Soil adds to itself remains of plants and animals. It makes a home for millions of minute forms of life. These same forms of life add to the soil life and productivity.
   b. Bones of animals become part of the soil.

6. a. Soils are all the same.
   b. The soil found along the shore of a marsh is the same as that found in a cornfield.

7. a. Man is master of the soil.
   b. Man can add things which will make better soil.

8. a. Land is soil, lakes, rivers, forests, and even climate and location.
   b. There is only water in a lake.

9. a. A combination of soil and climate make up land type.
   b. Land is only made up of bits of rock.

10. a. Man should use the land in a way that helps him.
    b. Man does not have to rely on land to live.

11. a. Good care of the land includes care of the soil, water, and forests.
    b. Land does better if man leaves it alone.

12. a. People can be proud of the way they have treated the land.
    b. People never destroy their land.

13. a. We have taken good care of our forests.
    b. We have alot of forests because we take care of them.

14. a. Some land has been cleared and farmed that should have been left as forests.
    b. All land should be farmed; if it is not, it is waste land.

15. a. Much of our land has not been used right.
    b. Some land should not be grazed by cattle or sheep.

Trees, Woodlots and Forests

1. a. Trees are important. All of us depend upon them for health, comfort and recreation.
   b. Only people living in or near forests depend upon trees.

2. a. People do not need things that are made from trees.
   b. Things that were once made from trees are now made from plastic.

3. a. Once a forest is gone, it cannot be replaced.
   b. Burned out forests can be replaced in three years.

4. a. Cedar and pine trees grow well in shelterbelts.
   b. Doves, blackbirds and robins would rather nest in cedar and pine trees than in elm trees.

5. a. Each tree needs a certain soil, a certain climate and a certain amount of rainfall to grow.
   b. Any kind of tree will grow in your yard.

6. a. Trees are all alike. It is very difficult to tell one from another.
   b. The reason they all look alike is that their leaves are all the same.

7. a. Trees have no bearing on soil, water, climate, wildlife and man.
   b. Trees are very valuable in stopping wind and soil erosion.

8. a. Trees depend upon wildlife.
   b. Wildlife do not help trees to grow.

9. a. Trees have many natural enemies.
   b. Air pollution caused by man damages many kinds of trees.

10. a. Forests must be cared for if they are to remain useful to man.
    b. Forests cannot grow without man's help.

THE FOLLOWING ARE CONCEPT STATEMENTS RELATED TO ENVIRONMENTAL AND OUTDOOR EDUCATION.

PLEASE READ EACH STATEMENT CAREFULLY AND THEN DECIDE WHETHER OR NOT YOU NEED ASSISTANCE IN DEVELOPING THIS CONCEPT.

1. Natural resources are interdependent and the use or misuse of one will affect the others.

_____yes _____no

2. In any environment, one component like: space, water, air, or food may become a limiting factor.

_____yes _____no

3. Most resources are vulnerable to depletion in quantity, quality, or both.

_____yes _____no

4. The interaction of environmental and biological factors determines the size and range of species and populations.

_____yes _____no

5. Natural resources, water and minerals in particular, are unequally distributed with respect to land areas and political boundries.

_____yes _____no

6. The renewable resource base can be extended by reproduction, growth, and management,

_____yes _____no

7. Natural resources affect and are affected by the material welfare of a culture and directly or indirectly by philosophy, religion, government, and the arts.

_____yes _____no

8. The natural environment is irreplaceable.

_____yes _____no

9. An organism is the product of its heredity and environment.

_____yes _____no

10. Man is influenced by many of the same hereditary and environmental factors that affect other organisms and their populations.

_____yes _____no

11. The rate of change in environment may exceed the rate of organism adaptation.

_____yes no no

12. Organisms and environments may exceed the rate of organism adaptation.

_____yes _____no

13. All living things are continually evolving.

_____yes _____no

14. The form of life present depends upon the coincidence of the life needs and their availability in an environment.

_____yes _____no

15. Biological systems are described as dynamic because the materials and energy involved are parts of continuous cycles; inorganic materials and energy become part of organic materials and are subsequently broken down into simpler substances and energy as a result of the operation of organic systems.

_____yes _____no

16. Animal populations are renewable resources.

_____yes _____no

17. Succession is the gradual and continuous replacement of one kind of plant or animal complex by another and is characterized by gradual changes in species composition.

_____yes _____no

18. Water supplies, both in quantity and quality are important to all levels of living.

_____yes _____no

19. The earth and life on it are greatly affected by the atmosphere.

_____yes _____no

20. Water is a reusable and transient resource, but the available quantity may be reduced or quality impaired.

_____yes _____no

21. As populations increase competition for the use of water increases resulting in a need for establishing water use priorities.

_____yes _____no

22. The amount of precipitation available for use by man varies with topography, land use, and applied management practices.

_____yes _____no

23. Mineral conservation involves the utilization of all known methods of using the minerals of the earth's crust that will cause them to serve more people for a longer time.

_____yes _____no

24. The nonrenewable resource base is considered finite.

_____yes _____no

25. Soil is classified as a renewable resource, but, because it may take a few years to thousands of years to be "renewed" it is more practically termed a depletable resource.

_____yes _____no

26. Minerals are nonrenewable resources.

_____yes _____no

27. Maintaining, improving, and in some cases restoring soil productivity is important to the welfare of people.

_____yes _____no

28. Geological processes like erosion and deposition modify the landscape.

_____yes _____no

29. Soil productivity can be maintained by the utilization of known agronomic, mechanical, and chemical processes.

_____yes _____no

30. Green plants are the ultimate sources of food, clothing, shelter, and energy in most societies.

_____yes _____no

31. Plants are renewable resources.

_____yes _____no

32. Energy is supplied to an ecosystem by the activities of green plants.

_____yes _____no

33. Wildlife refuges, undisturbed natural areas, and preserves may be of value in protecting endangered species and perpetuating the gene pool.

_____yes _____no

34. Wildlife populations are important economically, aesthetically, and biologically.

_____yes _____no

35. Wildlife is considered to be a public resource.

_____yes _____no

Teacher Comments: